

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 February 2004 (26.02.2004)

PCT

(10) International Publication Number
WO 2004/016334 A3

(51) International Patent Classification⁷: **B01D 61/20**

(21) International Application Number:
PCT/US2003/025230

(22) International Filing Date: 13 August 2003 (13.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/403,575 14 August 2002 (14.08.2002) US
60/471,603 19 May 2003 (19.05.2003) US

(71) Applicant (*for all designated States except US*): **RENSSELAER POLYTECHNIC INSTITUTE** [US/US]; 110 8th Street, Troy, NY 12180-3590 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **BELFORT, Georges** [US/US]; 162 Font Grove Road, Slingerlands, NY 12159 (US). **BARUAH, Gautam, Lal** [IN/US]; 1 Rear, 12 Marshall Street, Troy, NY 12180 (US).

(74) Agents: **GOLDMAN, Michael, L.** et al.; Nixon Peabody LLP, Clinton Square, P.O. Box 31051, Rochester, NY 14603 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
12 August 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MODEL FOR MICROFILTRATION OF POLY-DISPERSE SUSPENSIONS

(57) Abstract: The present invention relates to a method for predicting pressure independent permeation flux and target molecule yield in a permeate resulting from crossflow filtration of particles in a poly-disperse suspension, a method for determining packing density of particles at the membrane wall of a poly-disperse suspension, a method for designing a filtration system for a poly-disperse suspension, a method of selecting operating conditions of a crossflow filtration system for poly-disperse suspensions, and a method of modeling a process for filtration of a poly-disperse suspension using a computer generated program for predicting pressure independent permeation flux and target molecule yield.

WO 2004/016334 A3